

Work Order ID 159889***159889***

Page 1

Wednesday, April 19, 2017 1:40:35 PM

Item ID: D5350-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Cross Beam Assembly
Start Date: 4/21/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 5/3/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: SCHEDULED
Approvals: Process Plan: DAS 21 9-89 Date: APR 19 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D5350	D

100	Cut blanks as per folio	0.00
-----	-------------------------	------

100

Bandsaw

Jeaspa Bandsaw

Memo

Cut blank at 69.300"

0.33

4

ø

DAS
20
9-89

17-04-26

110		0.00
-----	--	------

110

HAAS 4

HAAS CNC vertical machine #4

Memo

1-Machine per folio FB447 (D5350-1)

DWG REV: DFOLIO REV: AA

5.66

4

DAS
20
9-89

17-04-28

2- Deburr and break all sharp edge as per dwg.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
☐ Environment	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
☐ Design	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
☐ Doc/Data	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
☐ Equip/Tooling	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
☐ Handling/Pre	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
☐ Material	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
☐ Internal Transport	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
☐ Tribal Knowledge	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
☐ LOA	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
☐ Substation	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
☐ Past Expiry Date	☐ Manufacturing Process	OTHER : _____					
☐ Misidentified	☐ Past Due						

Work Order ID 159889

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Item ID: D5350-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Cross Beam Assembly
 Start Date: 4/21/2017 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 5/3/2017 Req'd Qty: 4.00 *4* Customer:
 Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.04				4			DAS 20 9-89 17-04-28
130 *130* Mill Conv Conventional Milling Machine	Manufacture as per dwg Memo 1- C'SINK 2ND SIDE AS PER DETAIL "C"	0.00 0.13				4	0		DAS 20 9-89 17-04-28
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.08				4	0		DAS 44 9-89 17-05-03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
							QC / QA Coordinator Approval 		

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

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Item ID: D5350-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Cross Beam Assembly
 Start Date: 4/21/2017 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 5/3/2017 Req'd Qty: 4.00 *4* Customer:
 Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC7-Inspect Chemical Conversion Coat Memo	0.00 0.04							4 0 1705-11. 38 9-89
190 *190* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M 137176 Memo MASK HOLES AS PER NOTE 8 SHEET 3 START TIME: 1:10 OVEN TEMPERATURE: 320 FINISH TIME: 1:40	0.00 0.64							4 0 17-05-11. 38 9-89
200 *200* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.04							4 DAS 38 9-89 MAY 12 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐						OTHER : ☐	

Wednesday, April 19, 2017 1:40:35 PM

Item ID:	D5350-041	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:						
Item Name:	Fwd Cross Beam Assembly				Stop	*NS2*
Start Date:	4/21/2017	Start Qty: 4.00	*4*	Cust Item ID:		
Required Date:	5/3/2017	Req'd Qty: 4.00	*4*	Customer:		
Reference:	SCHEDULED					

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run** **Start** ***NR1***
 QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
							QC / QA Coordinator Approval 		

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Work Order ID 159889

Wednesday, April 19, 2017 1:40:35 PM

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Item ID: D5350-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Cross Beam Assembly
Start Date: 4/21/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 5/3/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC21- Final Inspection - Work Order Release	0.00							
240									
QC	Memo	0.40							
Quality Control									

DAS
21
9-89
MAY 17 2017

17/5/18

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
15 15 15								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

1,1415

Picklist Print

Wednesday, April 19, 2017 1:40:44 PM

Page 1

Work Order ID: 159889

159889

Parent Item: D5350-041

D5350-041

Parent Item Name: Fwd Cross Beam Assembly

Start Date: 4/21/2017

Required Date: 5/3/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 15.12.11 NEW ISSUE DD VERF:JLM IPP
 REV:B 16.01.25 rev.a dwg DD VERF:JLM IPP REV:C
 16.06.30 DWG REV.B DD VERF:JLM IPP REV:D 17.01.09
 DWG REV.c DD VERF:JLM IPP REV:E DWG. REV.D
 17/04/11 JFS VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
CBL-1240		Purchased	No			210	f	262.4127	5.42	22.82105			
CBL-1240									**			MAY 16 2017	DAS 19 9-89
Cable													

Location	Loc Qty	Loc Code
GA	262.4127488	
KS	162.412749	
m136491	100	
m136852		

5.7075
~~22.82105~~
 17.1225

FOR D2690-8
 CUT TO 13.000"

CBL-460

Purchased No

210 Each

10.0000

10

40

CBL-460

Loop Sleeve

**

MAY 16 2017

DAS
19
9-89

Location	Loc Qty	Loc Code
GA	10	
m136852	10	

40

FOR D2690-8

D5324-3

Manufactured No

210

Each

0.0000

1

4

D5324-3

Bracket

D5346-3

Manufactured No

210

Each

10.0000

4

16

D5346-3

Bushing

**

16.327x6 MAY 12 2017

DAS
6
9-89

Location	Loc Qty	Loc Code
ST165	10	
159256	10	

10

not pulled
 161326

**

(4)

17.525

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
320 01 02								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 159889

159889

Parent Item: D5350-041

D5350-041

Parent Item Name: Fwd Cross Beam Assembly

Start Date: 4/21/2017

Required Date: 5/3/2017

Start Qty: 4.00

Required Qty: 4.00

M6061T6B1.000X06.00
0

Purchased No

100 f

21.0300 5.775 24.31579

M6061T6B1 000X06 000

6061T6 BAR 1.00 X 6.00

**

23.125'

DAS
20
9-89

17-04-26

Location

Loc Qty

Loc Code

MAT003

21.03

m129639

4.5

m130013

2.7

m134705

7.83

m136108

6

D5350-5

Manufactured No

210 Each

0.0000

1

4

D5350-5

Adapter

AN3-13A

Purchased No

210 Each

46.0000

2

8

AN3-13A

Bolt

**

158878x3

160186x1

DAS
6

9-89

**

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

16

m127070

16

ST349

30

153845

29

m136406

1

MS17984-C412

Purchased No

210 Each

6.0000

2

8

MS17984-C412

Pin, Quick Release

**

13736/x2

DAS
6
9-89

MAY 12 2017

Location

Loc Qty

Loc Code

ST315

6

m136593

2

m137280

4

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Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Wednesday, April 19, 2017 1:40:44 PM

Page 3

Work Order ID: 159889

159889

Parent Item: D5350-041

D5350-041

Parent Item Name: Fwd Cross Beam Assembly

Start Date: 4/21/2017

Required Date: 5/3/2017

Start Qty: 4.00

Required Qty: 4.00

MS17984-C418

Purchased

No

210

Each

2.0000

1

4

MS17984-C418

QUICK RELEASE PIN

DAS
6
9-89

MAY 12 2017

Location

Loc Qty

Loc Code

FG

1

123482

1

ST315

1

152031

1

MS17984-C517

Purchased

No

210

Each

0.0000

2

8

MS17984-C517

Pin, Quick Release

MAY 17 2017

DAS
19
9-89

MS21042L3

Purchased

No

210

Each

1,193.000

2

8

MS21042L3

Nut

DAS
6
9-89

MAY 12 2017

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

168

m134360

102

M136665

66

OVER007

300

m134360

0

M136665

300

ST303

625

m137073

125

m137166

500

137321

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Misabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

Wednesday, April 19, 2017 1:40:44 PM

Page 4

Work Order ID: 159889

159889

Parent Item: D5350-041

D5350-041

Parent Item Name: Fwd Cross Beam Assembly

Start Date: 4/21/2017

Required Date: 5/3/2017

Start Qty: 4.00

Required Qty: 4.00

NAS1149D0316J

Purchased

No

210

Each

1,053.000

4

16

NAS1149D0316.J

Washer

Location

Loc Qty

Loc Code

ST264

1053

M134502

1053

DAS
6
9-89

MAY 12 2017

16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

DART AEROSPACE LTD		Work Order: 159 889
Description: Fwd crossbeam		Part Number: D5350-1
Inspection Dwg: D5350 Rev: 0		Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .257	+ .005 / - .001	.258	✓		SLIO	Ver N
.40	+/- .030	.400	✓			
1.00	+/- .030	1.000	✓			
1.20	+/- .030	1.200	✓			
2.00	+/- .030	2.000	✓			
.65	+/- .030	.649	✓			
3.15	+/- .030	3.150	✓			
.716	+ .010 / - .020	.716	✓			
37.20	+/- .030	37.200	✓		SLIO	Tape
39.70	+/- .030	39.700	✓		SLIO	Ver N
.300	+/- .010	.298	✓			
.25	+/- .030	.247	✓			
.280	+ .015 / - .005	.279	✓			
12.000	+/- .005	12.000	✓		SLIO	Tape
9.06	+/- .030	9.056	✓		SLIO	Ver N
.62	+/- .030	.620	✓			
.80	+/- .030	.800	✓			
5.22	+/- .030	5.220	✓			
4.05	+/- .030	4.050	✓			
2.55	+/- .030	2.550	✓			
.30	+/- .030	.300	✓			
.35	+/- .030	.352	✓			
.750	+/- .005	.750	✓			
.55	+/- .030	.550	✓			
1.00	+/- .030	1.000	✓			
.550	+/- .010	.550	✓			
.225	+/- .010	.224	✓			
Ø .323	+ .006 / - .001					
1.00	+ .030 / - 0.000					
.600	+/- .005					
.045 x 45°	+/- .015	.045	✓			
2.05	+ .030 / - .010	2.049	✓			

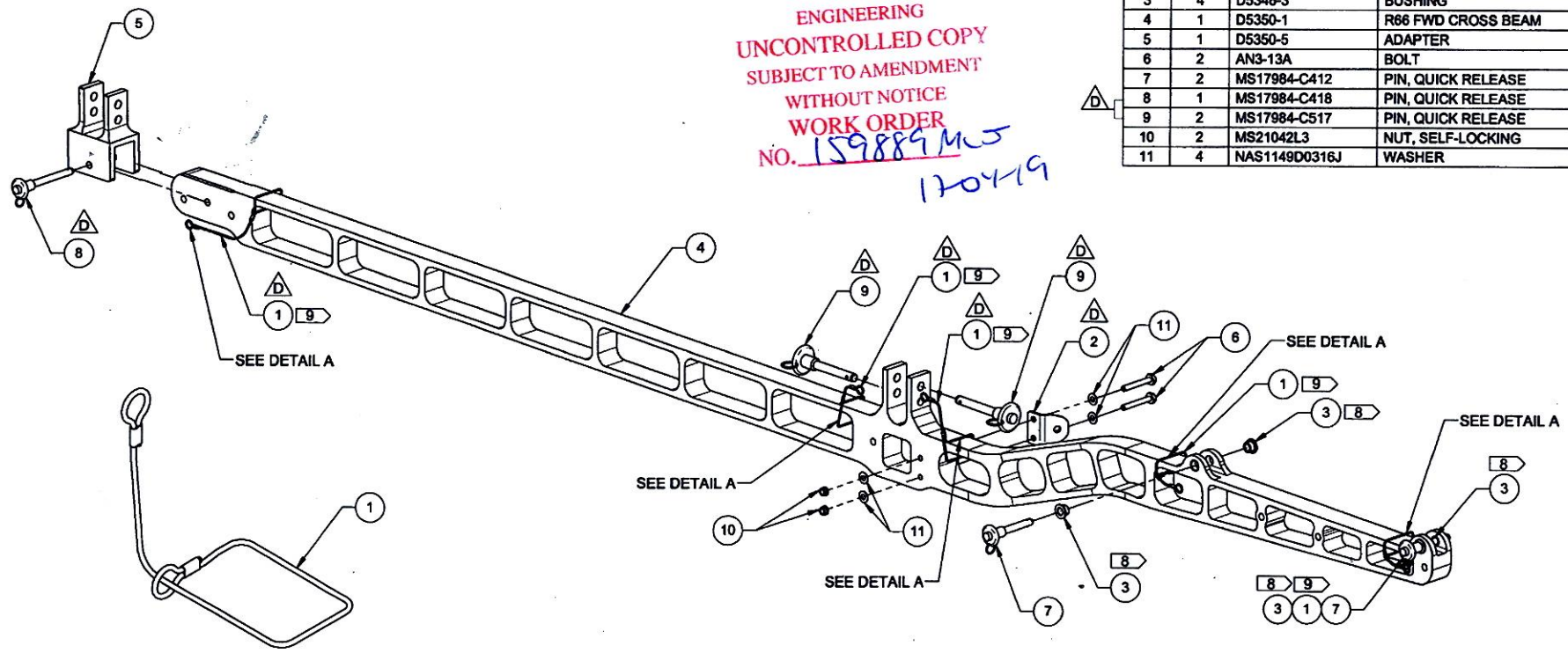
Measured by: 20 9-89	Checked by: 44 9-89	QC Inspector:
Date: 17-04-28	Date: 17-05-03	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 159889 MJS
 170419

ITEM	QTY -041	P/N	DESCRIPTION
	X	D5350-041	R66 FWD CROSS BEAM ASSEMBLY
1	5	D2690-8	LANYARD ASSEMBLY
2	1	D5324-3	BRACKET
3	4	D5346-3	BUSHING
4	1	D5350-1	R66 FWD CROSS BEAM
5	1	D5350-5	ADAPTER
6	2	AN3-13A	BOLT
7	2	MS17984-C412	PIN, QUICK RELEASE
8	1	MS17984-C418	PIN, QUICK RELEASE
9	2	MS17984-C517	PIN, QUICK RELEASE
10	2	MS21042L3	NUT, SELF-LOCKING
11	4	NAS1149D0316J	WASHER



DETAIL A

D5350-041 R66 FWD CROSS BEAM ASSEMBLY

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
 - 7) WEIGHT: 5.96 lbs
 - 8) PRESS FIT D5346-3 INTO D5350-1
 - 9) ASSEMBLE D2690-8 WITH MS17984-C412/C418/C517 AS SHOWN

RELEASED
 2017-03-22
 ECN 17-535

D	REDESIGN -1/31-5/041/043 (ZN A4-1, A4-2, A4-3, A4-4); 0.0.323 WAS 0.0.318 (ZN C1-3, C1-4, D3-5); REVISE BOM & NOTE 9 (ZN A8-1, D3-1, A8-2, D3-2); ADDED DETAIL A & B (ZN B7-1, B7-2)	RF	17.02.09
C	REDESIGN -1/31-041/043 (ZN A4-1, A4-2, A4-3, A4-4); ADDED -5 (ZN A4-5) & NOTE 10 & 11 (ZN A8-3, A8-4); REVISE BOM's ZN (D3-1, D3-2)	RF	16.11.18
B	REDESIGN -1/31-041/043 (ZN A4-1, A4-2, A4-3, A4-4)	RF	16.05.24
A	NEW ISSUE	RF	15.08.10
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	VS		
MFG. APPR.	JFS		
APPROVED	HS		
DE APPR.	DS		
DATE	17.02.09		

DART AEROSPACE LTD
 HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
D5350

REV. D
 SHEET 1 OF 5

TITLE
R66 BEAM ASSEMBLY

SCALE
 NTS

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